

REMARKS

Claims 1-49 remain pending in the application. In view of the following remarks, it is respectfully submitted that all of the pending claims are allowable.

Claims 1-3, 7, 15-17, 20-27, 29-32, 34 and 48 stand rejected under 35 U.S.C. 103(a) as unpatentable over Demetri Terzopoulos *et al.* "Artificial fishes: Autonomous locomotion, perception, behavior and learning in a simulated physical world", December 1994, Artificial Life, Vol. 1, No. 4, p. 327-351 (hereinafter "Terzopoulos *et al.*") in view of US Patent No. 6,600,491 ("Szeliski *et al.*").

In the rejection of independent claims 1 and 48, the Examiner combines Terzopoulos *et al.* and Szeliski *et al.* to demonstrate that these claims are unpatentable. More specifically, the Examiner states that the combination of the virtual fish of Terzopoulos *et al.* and the video base rendering with user-controlled movement of Szeliski *et al.* include all the elements of claims 1 and 48.

Terzopoulos *et al.* was discussed in the response to the first Office Action dated July 5, 2006. The Examiner agrees that Terzopoulos *et al.* does not disclose that "*said AIE being associated with at least one repeatable AIE animation clip defined by a memorized sequence of images representing a given movement*" as recited in the independent claims. The Examiner then states that this feature is present in Szeliski *et al.*

Generally stated, Szeliski *et al.* describe a method and system to produce an animated photograph that is in many ways an intermediate between a still photograph and a video. This concept is explained in column 9, lines 7 to 23. The Examiner states that video footage loops created according to Szeliski *et al.* method could be used to animate the fishes of Terzopoulos *et al.* and that the result of this combination would be equivalent to the method and system recited in independent claims 1 and 48.

The applicant respectfully disagrees with this argumentation of the Examiner. Szeliski *et al.* is based on video footage and loops to give the illusion of reality to animated photographs. While it appears possible to change the position the video footage loop on a background image to create movement of the video footage loop on the background image, the video footage loop would remain the same for any movement of the video footage loop on the background image since Szeliski *et al.* do not teach a “memorized sequence of images representing a given movement” as recited in the independent claims 1 and 48.

In other words, Szeliski *et al.* teaches in column 9, lines 7-11 a system and process for synthesizing a continuous video of a scene from a sampling of actual video images of the scene. This synthesis is possible whenever motion in a real-world scene exhibits some repetitive pattern. This obviously does not correspond to a “memorized sequence of images representing a given movement” as recited in the independent claims 1 and 48. Contrary to Szeliski, *et al.* this “memorized sequence of images representing a given movement” enables producing any movement of the AIE, repetitive or not.

It is therefore respectfully submitted that neither Terzopoulos *et al.* nor Szeliski, *et al.*, alone or in combination, would yield the claimed invention and therefore would not render the independent claims unpatentable.

Furthermore, the applicant respectfully submits that the combination of these two documents is improper. Indeed, it is respectfully submitted that should the video clip loops of Szeliski *et al.* and the animated fishes of Terzopoulos *et al.* be combined, the resulting fishes would not be autonomous fishes since their behavior and appearance would be dictated solely by the limited video feed loop. It is therefore respectfully submitted that the combination suggested by the Examiner would destroy the function of the autonomous animated fishes of Terzopoulos *et al.*, and that, at least for this reason, the combination is improper.

Accordingly, it is respectfully submitted that independent claims 1 and 48 are not rendered obvious by Terzopoulos *et al.* in view of Szeliski *et al.* and are thus allowable. Because claims 2-3, 7, 15-17, 20-27, 29-32 and 34 depend from, and therefore include, all of the limitations of independent claim 1, it is respectfully submitted that these claims are also allowable.

Claims 1, 5, 6, 7, 13, 18, 45, 46 and 49 stand rejected under 35 U.S.C. 103(a) as unpatentable over Hansrudi Noser *et al.* "Navigation for digital actors based on synthetic vision, memory and learning", 1995, Computers & Graphics Vol. 19, No. 1, p. 7-19 (hereinafter "Noser *et al.*") in view of Szeliski *et al.*

In the rejection of independent claims 1, 45 and 49, the Examiner combines Noser *et al.* and Szeliski *et al.* to demonstrate that these claims are obvious.

The Examiner states that Noser *et al.* do not teach "...each said AIE being associated with at least one repeatable AIE animation clip defined by a memorized sequence of images representing a given movement..." as recited in the independent claims 1, 45 and 49. The Examiner states that Szeliski *et al.* does teach this feature.

Arguments regarding Szeliski *et al.* as presented hereinabove still apply here. Again, while it appears possible to position the video footage loop on a background image to create movement of the video footage loop on the background image, the video footage loop would remain the same for any movement of the video footage loop on the background image since Szeliski *et al.* do not teach a "memorized sequence of images representing a given movement" as recited in the independent claims 1 and 45 and 49. It is therefore respectfully submitted that the combination of Noser *et al.* and Szeliski *et al.* would not yield the claimed invention and therefore would not render the independent claims unpatentable.

Accordingly, it is respectfully submitted that independent claims 1, 45 and 49 are not rendered obvious by Noser *et al.* in view of Szeliski *et al.* and are thus allowable. Because claims 5, 6, 7, 13, 18 and 46 depend from, and therefore include, all of the limitations of independent claims 1 and 45, it is respectfully submitted that these claims are also allowable.

Claim 4 stands rejected under 35 U.S.C. 103(a) as unpatentable over Terzopoulos *et al.* in view of US Patent No. 6,144,385 (Girard); claim 8 stands rejected under 35 U.S.C. 103(a) as unpatentable over Terzopoulos *et al.* in view of US Patent application No. 2004/0036711 (Anderson); claims 11 and 14 stand rejected under 35 U.S.C. 103(a) as unpatentable over Terzopoulos *et al.* in view of US Patent application No. 2002/0060685 (Handley *et al.*); claims 9, 10 and 12 stand rejected under 35 U.S.C. 103(a) as unpatentable over Noser *et al.*; claim 19 stands rejected under 35 U.S.C. 103(a) as unpatentable over Terzopoulos *et al.* in view of US Patents Nos. 6,115,053 (Perlin) and 7,002,583 (Rabb, III); claim 28 stands rejected under 35 U.S.C. 103(a) as unpatentable over Terzopoulos *et al.* in view of US Patent No. 6,141,019 (Roseborough *et al.*); claim 35 stands rejected under 35 U.S.C. 103(a) as unpatentable over Terzopoulos *et al.* in view of US Patent No. 6,011,652 to Gagné *et al.*; claim 36 stands rejected under 35 U.S.C. 103(a) as unpatentable over Terzopoulos *et al.* in view of US Patent No. 6,208,357 (Koga *et al.*); claim 37 stands rejected under 35 U.S.C. 103(a) as unpatentable over Terzopoulos *et al.* in view of US Patent No. 6,115,053 (Perlin *et al.*); claims 33 and 38-44 stand rejected under 35 U.S.C. 103(a) as unpatentable over Noser *et al.* in view of US Patent No. 6,144,385 (Girard); and claim 47 stands rejected under 35 U.S.C. 103(a) as unpatentable over Noser *et al.* in view of US Patent No. 5,710,894 (Maulsby *et al.*).

It is respectfully submitted that at least since these claims are directly or indirectly dependent onto allowable base claims, the dependent claims are also allowable in the present patent application.

In other words, each claim rejected by the Examiner under 35 U.S.C. 103(a) depends directly or indirectly on allowable independent claims. Accordingly, it is respectfully submitted


that the cited documents taken separately or in combination, do not render the present invention obvious, as neither of these documents or combinations of documents would lead directly and without difficulty one of ordinary skill in the art to the present invention.

CONCLUSION

In light of the foregoing, Applicants respectfully submit that all of the pending claims are in condition for allowance. All issues raised by the Examiner having been addressed. An early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

Dated: September 17, 2007



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